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**(54) EXHAUST PARTICULATE PURIFYING DEVICE****(57) Abstract:**

**PURPOSE:** To prevent crack and melting damage of a filter caused by excessive raising of a regenerating temperature by arranging a means for detecting the particulate collecting amount of the filter, and inhibiting regeneration of the filter by a regenerating means when a detected particulate collecting amount becomes a over collecting condition value or more.

**CONSTITUTION:** In an ECU 13 during engine operation, front pressure P1 and rear pressure P2 which are detected by pressure sensors 9, 10 are subtracted, and the pressure difference  $\Delta P$  in a filter 7 is found out. A intake air mass flow rate G detected by a hot wire type flow rate sensor 3 is found out, and the volume flow rate V of fluid which passes through the filter 7 is found out from the front pressure P1 and the average temperature Tex of an input gas temperature and a discharge gas temperature which are detected by temperature sensors 11, 12. The collecting amount PMq of exhaust particulate is found out from the pressure difference  $\Delta P$  and the volume flow amount V. In the case where the collecting amount PMq is in a regeneration judging range value, it is transferred to regeneration control, collecting particulate is burnt by heating of an electric heater 8. In the case where a condition in

which regeneration is not enabled is continued for a long time, excessive collection is judged, and regenerating treatment is inhibited.

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